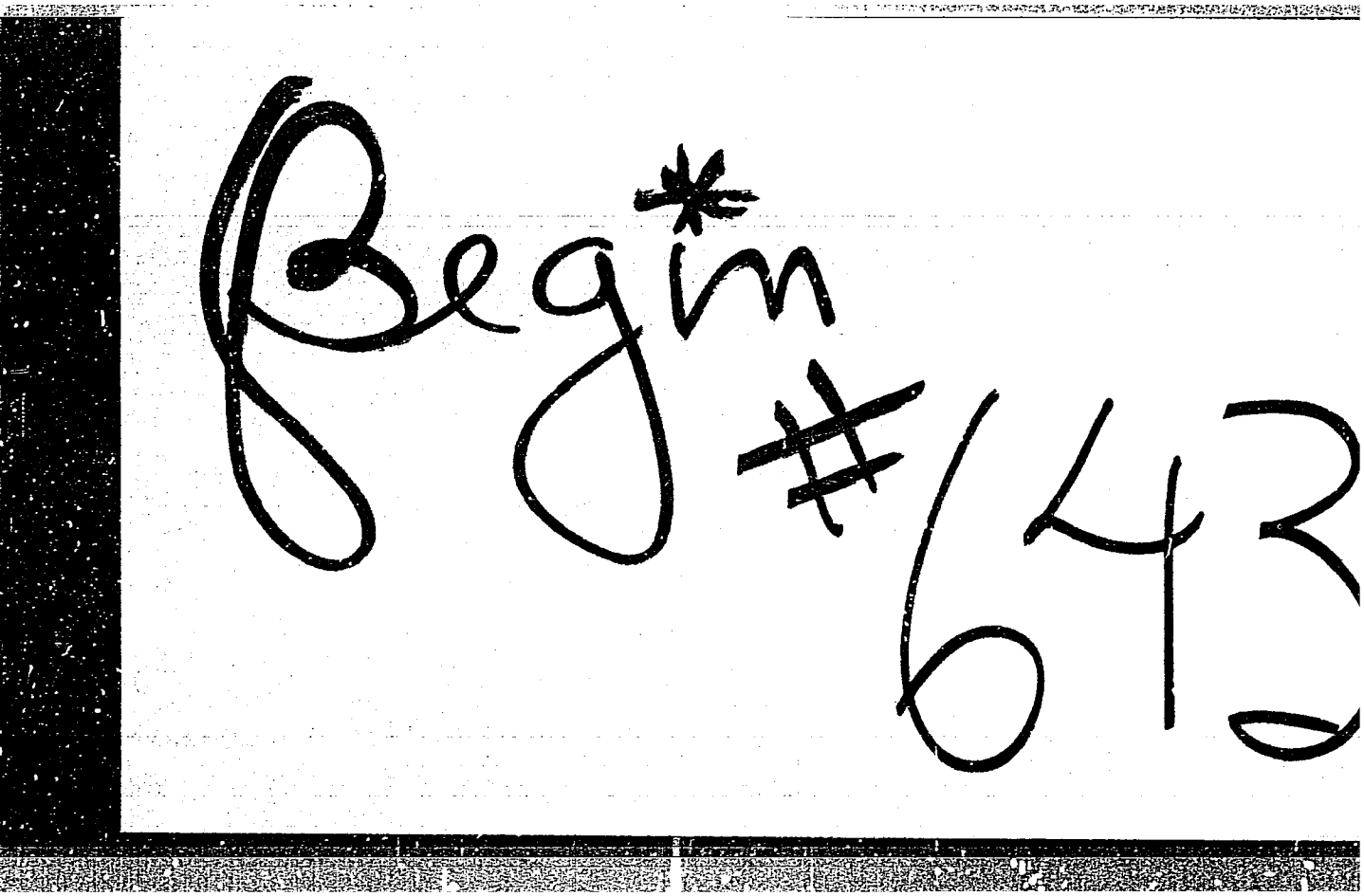


S/169/61/000/010/028/053
D228/D304

AUTHORS: Vasil'yev, G. V., Vasil'yev, K. N., and Goncharov, L. P.

TITLE: Automatic panoramic ionosphere station of the AIS type

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 10, 1961, 2, abstract 10G15 (Geomagnetizm i aeronomiya, 1, no. 1, 1961, 120-127)

TEXT: The design and operating principle of a station of the AIS type are described in general outline. A series of such stations were prepared in the USSR for equipping the network of observatories taking part in the I.G.Y. and I.G.U. The brief technical data for the station are: output power of 5 - 10 kW ; linear frequency-band of 1 - 10 or 1 - 18 Mc/s ; overlap time-range of 20 sec.; impulse duration of 50 - 70 μsec.; repetition frequency of 50 pulses/sec.; frequency marks through 1 Mc/s ; height marks through 50 km; linear frequency-band of 0 - 250, 0 - 750, and

Card 1/3

Automatic panoramic...

0 - 1500 km; general heterodyne tuning for the transmitter and receiver; receiver sensitivity of 10 μV ; passage band at the 0.7 - 20 kc/s level; program of automatic operation after 60, 30, and 15.5 min. or continuously. B-type indicator in a tube with a diameter of 25 cm; recording on 35-mm film; antennas with two vertical rhombs in the range of 1 - 6 and 5 - 18 Mc/s ; alternating single-phase charging voltage of 180 - 230 V and 50 c/s ; input of 1.7 kW. The photography, block-circuit, specimen diagrams and outline of the antenna layout are given. The described station's advantages are: the high output power, the presence of two frequency bands, the indicator with a large screen, the simplicity of the circuit, the small size and weight, the effective antenna system, and also the high operational reliability. In the constructional respect, the most original units developed by the authors include: the modulator, which guarantees the transmitter's reliable and qualitative working; the simple and reliable scheme of automation, based on the use of a standard КПЧ (KPCh) contact-actuating clock; and also the extremely effective antenna-system for the wide frequency-band. The station's outfit--which together with the spare

Card 2/3

S/169/61/000/010/028/053
D228/D304

Automatic panoramic...

parts and instrument includes a set of measuring devices, a fully equipped antenna-system, a power plant, appliances for developing the photographic film, etc.--enables it to be deployed at any site. [Abstracter's note: Complete translation.]

Card 3/3

VASIL'YEV, K.N.; VELESHIN, A.S.; KOSENKOV, A.R.

Ionospheric effect of the solar eclipse of February 15, 1961 according to observations made in Moscow. Geomag.i aer. 1 no.2:277-278 Mr-Ap '61. (MIRA 14:7)

1. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR.
(Eclipses, Solar—1961) (Ionosphere)

B/169/62/000/010/060/071
D228/D307

AUTHOR: Vasil'yev, K.M.

TITLE: Voyage of the nonmagnetic schooner "Zarya" in 1959-1960

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 10, 1962, 4, abstract 10G30 (Geofiz. byul. Mezhduved. geofiz. kom-t pri Prezidiume AN SSSR, no. 11, 1962, 47-49)

TEXT: During the second voyage in the Indian and Pacific Oceans from August 20, 1959, to May 15, 1960, the nonmagnetic scientific-research ship "Zarya" conducted continuous magnetic and ionospheric observations, in particular vertical sounding and the measurement of the neutron component of cosmic rays, along the whole travel line (the vessel's routes are given). A list is given of the foreign observatories, which the expedition's participants visited in order to compare the readings of shipboard instruments with the s on shore. [Abstracter's note: Complete translation]

Card 1/1

S/831/62/000/010/011/013
E192/5382

9.9100

AUTHORS: Vasil'yev, K.N. and Kosenkov, A.R.

TITLE: Operational radius of the ionospheric-station observations carried out on board the schooner "Zarya"

SOURCE: Ionosfernyye issledovaniya. Sbornik statey, no. 10. V razdel programmy MGG (ionosfera) Mezhduv. geofiz. kom. AN SSSR. Moscow, Izd-vo AN SSSR, 1962. 98-101

TEXT: An attempt is made to compare measurements of f_oF2, carried out on the schooner "Zarya", with the values of f_oF2 of the fixed station at Yamagava (Japan), situated in the vicinity of the schooner's route. The comparison is based on the deviation Δf_oF2 from the average values rather than the absolute values of f_oF2. For this purpose, the linear correlation coefficient ρ between the values of Δf_oF2 of the two stations is calculated. The number of terms taken for the evaluation of

Card 1/3

Operational radius of ....

the coefficient ρ varied from 24 to 9 (if the number of "blanks" at one of the stations were 15). If a larger number of blanks were present, the data for that particular day were disregarded. The route of the schooner extended from New Guinea to the southern extremity of Japan and then to Vladivostok. This route was chosen because it was near to the meridian plane and because the data relating to the ionospheric stations in the vicinity of the route were available. The Yamagava station ($\varphi = 31^{\circ}12'$ N and $\lambda = 130^{\circ}37'$ E) was conveniently situated. The measurements were made during April/May, 1960, when the ionosphere and magnetic field were only moderately perturbed. The values of ρ as a function of the latitudinal distance are shown in Fig. 1. It is seen that at low and near-equatorial latitudes the operational radius of the ionospheric station (which is determined by the value of $\rho = 0.5$) amounts to 5-7°. There are 3 figures and 1 table

Card 2/3

VASIL'YEV, K.N.

Cruise of the nonmagnetic schooner "Zaria" in 1959 -- 1960. (MIRA 15:8)
Geofiz.biul. no.11:47-49 '62.
(Geophysical research)

9 9110

45214
S/203/63/003/001/011/022
A061/A126

AUTHORS: Ben'kova, N. P., Vasil'yev, K. N.

TITLE: The E layer in low latitudes as investigated on the schooner "Zarya"

PERIODICAL: Geomagnetizm i aeronomiya, v. 3, no. 1, 1963, 88 - 93

TEXT: Ionospheric observations, in addition to geomagnetic measurements, were conducted with an АИС (AIS) ionospheric recorder on the nonmagnetic schooner "Zarya" in the Indian and the Pacific Ocean in 1959 - - 1960. A report is given of the analysis performed on the results. The latitude distribution of the f_0E layer at all hours of a day is described. Special features in the equator region (lessening of the f_0E layer in the region of the geomagnetic equator) are shown to become more manifest in the morning and evening hours, and to smooth out at midday. The daily course of the f_0E layer can be described by the formula $f_0E = K \cos^n \chi$. n differs in the morning and evening hours. The value n in the morning varies appreciably with the latitude. It is a maximum at latitudes of

Card 1/2

S/203/63/003/001/011/022
A061/A126

The E layer in low latitudes [illegible]...

$\pm 20^{\circ}$ and a minimum at the geographic equator. There are 5 figures.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation AS USSR)

SUBMITTED: July 27, 1962

Card 2/2

BEN'KOVA, M.P.; VASIL'YEV, K.N.

E-layer at low latitudes based on studies performed on the schooner "Zaria." Geomag. i aer. 3 no.1:88-93 Ja-F '63. (MIRA 16:4)

1. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR.

(Sporadic (Ionosphere))

BEN'KOVA, N.P.; VASIL'YEV, K.N.

Ionospheric research on the schooner "Zarya". The F2 layer in the equatorial region. Geomag. i aer. 4 no.5:842-849 S-O '64.
(MIRA 17:11)

1. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR.

L 2637-66 EWT(1)/FCC/EWA(h) GW
ACCESSION NR: AP5025489 UR/0203/65/005/005/0952/0955
550.388

AUTHOR: Vasil'yev, K. N.; Agafonnikov, Yu. M.

TITLE: A positive system for recording ionospheric characteristics using an AIS ionospheric sounder

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 5, 1965, 952-955

TOPIC TAGS: ionospheric sounder, ionogram, ionospheric physics

ABSTRACT: The recording system in the AIS ionospheric sounder was altered from negative to positive (brightness modulation) with a corresponding change in the receiver output for continuous recording. This type of recording gives frequency markers and altitude-frequency characteristics in the form of a light trace against a dark background. In the modified system there is practically no attenuation in the output signal after video amplification since rather large values of resistance (18 to 20 kohm) are used as cathode loads in the cathode followers. Calculations and measurements on this system have shown the transmission factor of the cathode followers to be ~95. In addition to this, the positive system shows an improvement in the visual

Card 1/2

L 2637-66

ACCESSION NR: AP5025489

5

perception of ionograms during processing, i. e. analysis of ionograms is somewhat facilitated and the number of subjective errors is reduced. A schematic diagram of the AIS system is given. Tests of the proposed positive recording system showed that high quality ionograms can be taken even when low-efficiency antennas are used. The authors give an outline of the changes made in the receiver and frequency marker transmitter. An ionogram taken with the modified instrument is shown. "In conclusion, the authors are grateful to N. V. Mednikova and Yu. V. Kushnerevskiy for valuable remarks, and also to R. D. Petrova and V. N. Strel'chuk for formulating this work." Orig. art. has: 2 figures. [14]

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, the Ionosphere, and Radio Wave Propagation, AN SSSR)

SUBMITTED: 27Oct64 ENCL: 00 SUB CODE: ES

NO REF SOV: 002 OTHER: 001 ATD PRESS: 4124

Card 2/2

BEN'KOVA, N.P.; VASIL'YEV, K.N.; NGUEN KIM KHUE

Ionospheric observations on the schooner "Zarya." The magnetic field at the level of the atmosphere. Geomag. i aer. 4 no.6:1043-1051 N-D '64. (MIRA 18:1)

1. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR.

L 41374-65 EEO-2/EWT(d)/EWT(l)/EWG(v)/FCC/EEC-4/EEC(t)/EED-2 Pc-4/Pe-5/
Pae-2/Pi-4 GW
ACCESSION NR: AP5000519 S/0203/64/004/006/1043/1051

AUTHOR: Ben'kova, N. P.; Vasil'yev, K. N.; Nguyen Kim Khue

TITLE: Ionospheric observations of the magnetic field at the ionospheric level, made on the schooner Zarya

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 6, 1964, 1043-1051

TOPIC TAGS: magnetic field, ionosphere, radio signal, magneto ionic fission, critical frequency, F2 layer, magnetic meridian, spherical harmonic, ordinary component, extraordinary component

ABSTRACT: The state of the magnetic field at the ionospheric level is evaluated by means of the magneto-ionic fission of radio signals. The total magnetic field at the ionospheric level is determined from the difference between the critical frequencies of the ordinary and the extraordinary components of the radio wave ($\Delta = f_x - f_o$), taking into consideration magnetic data obtained on the ground. The magnetic field in the F2 layer was determined at various latitudes including the equatorial zone. The ordinary component, on entering the ionosphere, is deflected northward from the plane of the magnetic meridian by the magnetic field, and the extraordinary component southward, again by the magnetic field. The frequency

Card 1/2

L 41374-65
ACCESSION NR: AP5000519

3

difference measured is greater or smaller than the true difference because of this deflection. The difference measured must be corrected for a value δ, a function representing the latitudinal gradient of the critical frequency. The sign of δ depends upon the gradient sign. The maximum heights of reflection in the F2 layer took place between 350—450 km. A standard height of 400 km for reduction of the differences measured was used. The magnetic field computed from the reduced frequencies was compared with that computed from the frequencies measured on the [illegible] meridional [illegible]
figures, 1 table, and 5 formulas.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, Ionosphere, and Propagation of Radio Waves, AN SSSR)

SUBMITTED: 19May64 ENCL: 00 SUB CODE: ES

NO REF SOV: 011 OTHER: 006 ATD PRESS: 3173

Card 2/2

L13765-65 EWT(1)/EWG(v)/FCC/EEC-4/EEC(t)/EWA(h) Pc-4/Pe-5/Pq-4/Pae-2/Peb Pi-4
ACCESSION NR: AP4046282 ESD(t) TM/WS S/0203/64/004/005/0842/0849

AUTHOR: Ben'kova, N. P.; Vasil'yev, K. N.

TITLE: Ionospheric investigations on the schooner "Zarya". The F2 layer in the equatorial region

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 5, 1964, 842-849

TOPIC TAGS: ionospheric investigation, critical frequency, geomagnetic equator, geomagnetic latitude, F layer, reflection diffusion, active F layer height

ABSTRACT: Critical frequencies of the F2 layer of the ionosphere diminish on the geomagnetic equator and increase in the belt of geomagnetic latitudes from 18° to 20°. The critical frequencies and active heights of the F layer are analyzed on the basis of data obtained on the schooner "Zarya." In the belt of northern geomagnetic latitudes from 28° to 40°, the layer was split into two layers, F1 and F2, during the daytime. In the belt of northern geomagnetic latitudes from 10° to 28°, the critical frequency of the F2 layer has a deep minimum in the morning and a high maximum in the daytime. The

Card 1/2

L 13765-65
ACCESSION NR: AP4046282

division of the F layer takes place in the daytime. The equatorial belt has a deep minimum in the morning and two maxima, one before noon and another in the afternoon. In the morning and evening, a strong diffusion of reflections takes place. In the southern belt to 40°, the behavior of the F layer parameters is similar to that in the northern belt. The active height of the F layer attains 300km at night in the belts from 30° to 40° in both hemispheres. Orig. art. has: 7 figures.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery* i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, Ionosphere, and Propagation of Radio Waves, AN SSSR)

SUBMITTED: 27Dec63 ATD PRESS: 3131 ENCL: 00

SUB CODE: ES NO REF SOV: 006 OTHER: 006

Card 2/2

VASIL'YEV, K. I.

Vasil'yev, K. I. and Glagoleva, M. G., "Relationship between Wind and Pressure Gradient", Trudy TsIP, No 3, 1943 (64-9-)

SO: U-3079, Mar 11 1953

VASIL'YEV, K. P.

32395. Vasil'yev, K. P. i Glagoleva, M. G. O dreyfe l'dov. Trudy Tsentr. in-ta prognozov, vyp. 14, 1949, s. 27-37. ----- Bibliogr: 13 Nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 44

VASIL'YEV, K. P.

32394. Vasil'yev, K. P. Sposob prelvychisleniya techeniy v Kerchenskom prolive. Trudy Tsentr. in-ta prognozov., vyp. 14, 1949, s. 38-44 ----- Bibliogr: 8 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 44

VASIL'YEV, K.P.

USSR/Meteorology - Cloud effects

Card 1/1 : Pub. 86 - 30/40

Authors : Shtyurmer, V. L., and Vasil'ev, K. P.

Title : Sunlight reflected from a cloud

Periodical : Priroda 43/4, page 115, Apr 1954

Abstract : A detailed description is given of unusual lighting effects produced after a rain, the striking features of which were a double rainbow and a fanlike display of seven rays emanating from a cloud and bent at right angles.

Institution : .....

Submitted : .....

VASIL'YEV, K.P.

Weather forecast. Nauka i zhizn' 22 no.4:47-48 Ap '55. (MLRA 8:6)

1. Uchenyy sekretar' Tsentral'nogo instituta prognozov.
(Weather forecasting)

FROLOV, Aleksey Dmitriyevich; MOZHZHEVELOV, B.N., retsenzent; VASIL'YEV, K.P., red.

[Radio equipment assembly; basic design principles] Uzly radioapparatury; obshchie osnovy konstruirovaniia. Moskva, Izd-vo "Energiia," 1964. 469 p. (MIRA 17:8)

L 34107-66 EWT(1)/FCC GW (N)
ACC NR: AP6009790 SOURCE CODE: UR/0050/65/000/012/0050/0051

AUTHOR: Vasil'yev, K. P. (Candidate of physico-mathematical sciences)

ORG: Central Institute of Forecasting (Tsentral'nyy institut prognozov)

TITLE: The state and prospects of hydrometeorological servicing of ships of the Ministry of the Maritime Fleet and the Fishing Industry

SOURCE: Meteorologiya i gidrologiya, no. 12, 1965, 50-51

TOPIC TAGS: hydrometeorology, weather forecasting, long range weather forecasting, fishing ship, cargo ship, marine meteorology

ABSTRACT: Improved servicing of ships of the maritime and the fishing industry, in addition to information on the current state of the weather and the sea and forecast of their short-range changes at sea, it is necessary to carry out specialized servicing of ships making transoceanic crossings by recommended routes and of vessels sailing in coastal waters and inland seas and to provide information on the current weather and state of the sea and their extended daily forecast along the sailing routes. As more ships become equipped with facsimile equipment it is necessary to change over to transmission of factual

UDC 627.933

Card 1/2

L 34107-66
ACC NR: AP6009790

and prognostic hydrometeorological facsimile charts. Hydrometeorological servicing of fishing vessels that are fishing in remote regions of the ocean should be done directly in the region by special synoptic groups at the sailing base. In addition to information on the current weather, state of the sea, and their immediate changes, it is important to issue long-range forecasts of weather and the state of the sea. Especially important are long-range weather forecasts of ice conditions which will permit planning the operation of the fleet. In order to eliminate present shortcomings the author recommends that the sea for which forecasts are issued, be divided into regions (squares) with similar hydrometeorological conditions and to compile forecasts of the weather and state of the sea for each region. The long-range forecast of ice conditions should not be limited to a forecast of the ice phases, but also should contain a forecast of the thickness and position of the ice edge and its passability. The author also recommends that a manual be compiled for selecting optimal (recommended) routes for vessels. For this purpose investigations must be carried out which will permit determining under what types of synoptic processes and by what routes the ships can most profitably sail in order to spend the minimal time for sailing from one point to another. By having data from such an investigation and by depending on the forecast of synoptic processes, in particular on their stability in time, each vessel can be given recommendations on selecting the sailing course.

SUB CODE: 04, 15 / SUBM DATE: none

Card 2/2 mf

VASIL'YEV, K.P., kand. fiz.-matem. nauk

Using meteorological information and forecasts in supplying ships with recommended courses. Meteor. i gidrol. no.2:38-40 F '65. (MIRA 18:3)

1. TSentral'nyy institut prognozov.

VASIL'YEV, K.P., kand. fiz.-matem. nauk

State and prospects of the hydrometeorological service of ships of the Ministry of Sea Transport and the fishing industry. Meteor. i gidrol. no.12:50-51 D '65.
(MIRA 18:11)

1. TSentral'nyy institut prognozov.

S/169/61/000/012/063/089
D228/D305

AUTHOR: Vasil'yev, K. P.

TITLE: Thunderstorm observations in the Pacific Ocean

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1961, 35, abstract 12B230 (Meteorol. i gidrologiya, 1961, no. 6, 45)

TEXT: On December 17, 1960, the coworkers of the "A. I. Voyeykov"--a research ship of the Gidrometeosluzhba SSSR (Hydrometeorologic Service of the USSR), then situated at 36° N 180° E--observed intracloud discharges in the form of lightning flashes without thunder at 22 hr. 6 min. ship's time for 24 minutes. The passage of the thunderstorm was accompanied by the strengthening of the wind to gale-force (to 24 m/sec.) and by rainfall of a torrential character (10 mm of precipitation fell in 20 min.). At the moment of the thunderstorm's passage over the

Card 1/2

S/169/61/000/012/063/089
D228/D305

Thunderstorm observations...

ship, the pressure increased sharply by 6 mb, after which it remained constant for an hour, then fell again, and at 4 a.m. on December 18, it dropped to 923 mb. The author supposes that the severe gales preceding the thunderstorm, caused by great temperature differences between the underlying surface (the ocean) and the air, promoted much electrification in the atmosphere. [Abstracter's note: Complete translation.]

Card 2/2

VASIL'YEV, K.P.

Observations on a thunderstorm in the Pacific Ocean. Meteor.i gidrol. no.6:45 Je '61. (MIRA 14:5)
(Pacific Ocean--Thunderstorms)

VASIL'YEV, K.P.; GRUZINOV, V.M.

Some hydrological features of the Sargasso Sea. Meteor.i gidrol. no.7:32-35 Jl '61. (MIRA 14:6)
(Sargasso Sea—Hydrology)

88744

9.4110 (1103, 1143, 1331)

S/166/60/000/006/004/008
C111/C222

AUTHORS: Vasil'yev, K.P., Kamardin, I.F., and Shmar'yan, M.

TITLE: Investigation of the Migration of the Electrode Material in a Ratio Tube With an Oxide - Coated Cathode

PERIODICAL: Izvestiya Akademii nauk Uzbekskoy SSR, Seriya fiziko-matematicheskikh nauk, 1960, No. 6, pp. 53 - 62

TEXT: The authors investigate migration phenomena in the double triode 6 Н 3 П (6NZP) with a bantam construction. The parts of the investigated bantam radio tube were radiated with thermal neutrons, in a nuclear reactor and thereby they were made radioactive. About 50-60 days after the radiation when short-life isotopes (Au^{198}, Mg^{28} and others) were decayed, such a radioactive structural element was installed in the tube 6 NZP. Then the activity generated by this element in other parts of the tube was measured. The results of the measurements have only a qualitative character. It was stated : The material of the core of the heater, in the case in question it was tungsten, migrated to most of the elements of the tube : on the cathode, net, anode, mica insulators, etc. The material of

Card 1/2

8874
S/166/60/000/006/004/008
C111/C222

Investigation of the Migration of the Electrode Material in a Ratio Tube With an Oxide - Coated Cathode

the core of the cathode - nickel - comes on the net and the anode by vaporization through the pores of the oxide - coating. The material of the net (nickel and tungsten) vaporized onto the cathode, anode, insulators, shield grid. The materials of the oxide - coating (Ba^{133} and C^{14}) appeared on the anodes, shield grid and on the inner surfaces of the mica insulators. The observed migration phenomena are essential for the investigation of the work of the oxide cathode since because of the porosity of the oxide coating the migrating elements penetrate in the depth and influence the emission properties of the cathode.
There are 3 figures, 1 table and 19 references : 15 Soviet, 2 French and 2 American.

ASSOCIATION: Tashkentskiy gosuniversitet imeni V.I. Lenina
(Tashkent State University imeni V.I. Lenin)

SUBMITTED: January 5, 1960

Card 2/2

VASIL'YEV, K. P.

Category : USSR/Radiophysics - Generation and Conversion of Radio-frequency Oscillations I-4

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4481

Author : Vasil'ev, K.P., Chizhikov, K.K.
Title : Investigation of a Self-Excited Quartz Oscillator Connected in a Capacitance Bridge

Orig Pub : Sb. statey nauch.-stud. o-va Mosk. energ. in-ta, 1956, vyp. 9, 86-98

Abstract : Analysis of a circuit of a self-excited oscillator with a capacitive bridge filter in the feedback loop for the n'th harmonic of a quartz resonator. The condition for the self-excitation of such an oscillator is obtained and investigated and its stationary mode is investigated. The results of the experiments are in qualitative agreement with the theoretical ones, although there is a considerable numerical discrepancy between the two.

Card : 1/1

KHANZEN, G.A. (Riga); VASIL'YEV, K.T. (Riga)

Brief. news. Sovet. zdravookhr.5: 93-96 '63 (MIRA 17:2)

1. Otvetstvennyy sekretar' Latviyskogo nauchno-istoriko-meditsinskogo obshchestva.

VASIL'YEV, K.T.

Characteristics of regional virus strains of epidemic parotitis. Zhur.mikrobiol.epid. i immun. 27 no.4:88-89 Ap '56. (MLRA 9:7)
(LATVIA--MUMPS VIRUS)

VASIL'YEV, K. V.

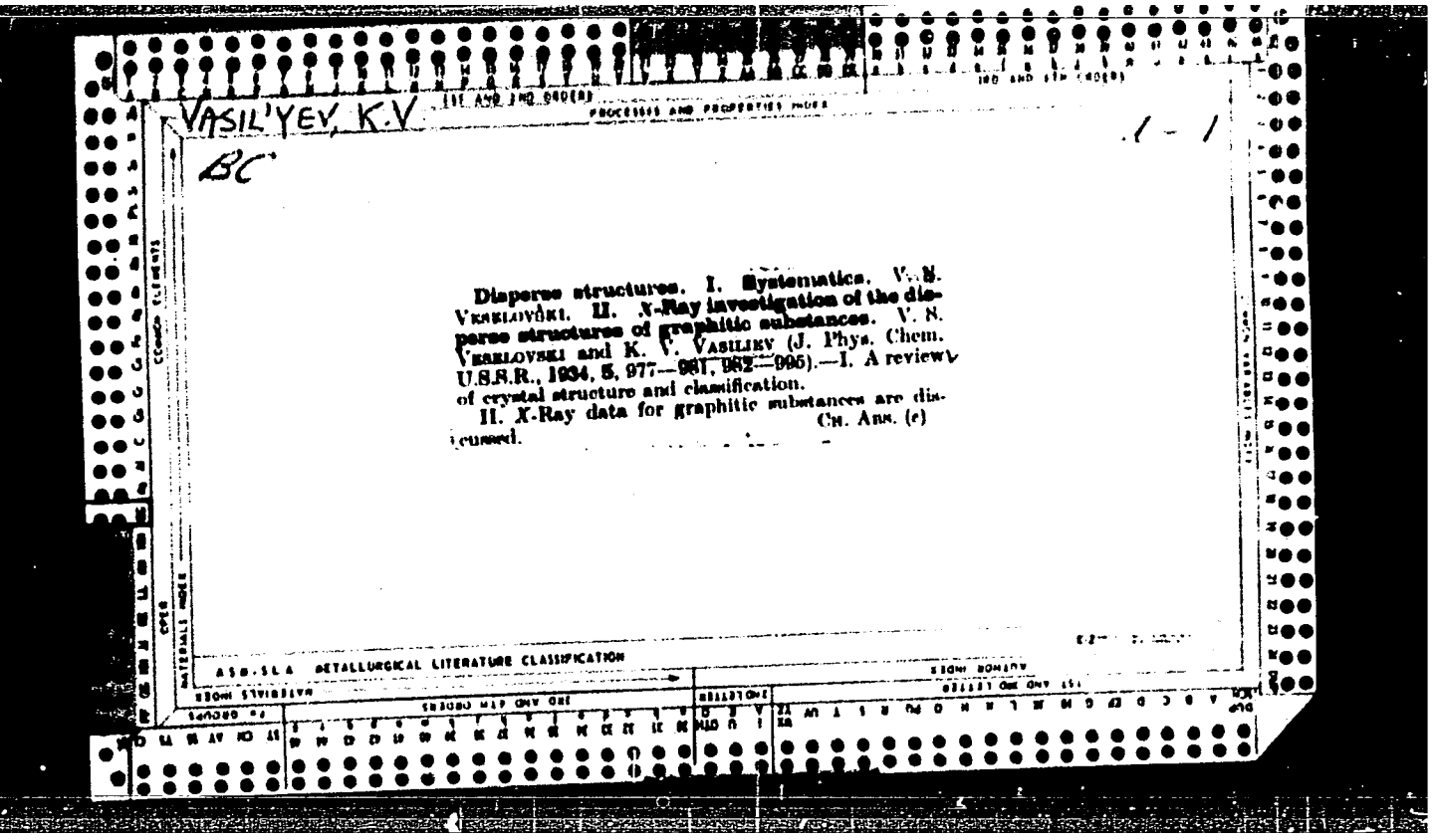
ZAYETS, V.K., kandidat sel'skokhozyaystvennykh nauk; VEN'YAMINOV, A.N.; YENIKEYEV, Kh. K.; RYABOV, I.N.; KOSTINA, K.P.; PINAYEV, Ye. P.; SYUBAROVA, E.P.; VASIL'YEV, K.V.; PROTASEVICH, L.A.; CHEREVATENKO, A.S.; UL'YANISHCHEV, M.M.; ORATOVSKIY, M.T.; DUKA, S.Kh.; SINITSYNA, N.S., redaktor; SOKOLOVA, N.N., tekhnicheskiy redaktor

[Breeding stone fruits; collection of articles] Selektsiia kostochkovykh kul'tur; sbornik statei. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1956. 278 p. (MLRA 10:4)

1. Moscow, Nauchno-issledovatel'skiy institut sadovodstva imeni I.V. Michurina.
(Fruit culture)

VASIL'YEV, K. V.

"The Problem of the Theoretical Determination of Vertical Currents in the Free atmosphere," Gerl. Reitr. Geoph., Vol XV, 1926.



VASIL'YEV, K.V.

BC

Disperse structures. I. Systematics. V. N. Verkhovskii. II. X-Ray investigation of the disperse structures of graphitic substances. V. N. Verkhovskii and K. V. Vasiliev (J. Phys. Chem. U.S.S.R., 1934, 5, 977—981, 982—995).—I. A review of crystal structure and classification.

II. X-Ray data for graphitic substances are discussed. Ch. Abs. (e)

M.

USSR/Cultivated Plants - Subtropical. Tropical.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15817

Author : A.S. Koverga, K.V. Vasil'yev

Inst : The All-Union Scientific Research Institute for Tea and Subtropical Cultures.

Title : The Citrus Cultures in the Chinese People's Republic. (Tsitrusovyye kul'tury Kitayskoy Narodnoy Respubliki).

Orig Pub : Byul. Vses. n.-i. in-ta chaya i subtrop. kul'tur, 1956, No 4, 144-169

Abstract : Information is presented which is the product of the personal experience of the authors with the citrus raising of China. The citrus crops are advantageously situated along the south of the Yangtse River between 20-30° North latitude (detailed facts on the regions of their cultivation are given).

Card 1/3

USSR/Cultivated Plants - Subtropical. Tropical.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15817

There were 23-24 thousand hectares with citrus crops in China in 1952 which yielded ~ 300 thousand tons of fruit. China has no particularly frost resistant citruses. The basic crop (about 70%) is the mandarin orange, then the orange and in third place the grapefruit, lemons not being raised for commercial purposes. The citrus species and variety composition is elucidated according to the provinces with description being presented for the best varieties. There are excellent varieties and forms of mandarin orange (Tszyao-gan, Pon-gan), of orange (Ou-gan, Si-mi, Tsi-pi) et alia. Citruses are cultivated as a rule rather densely at 3.3 x 4.4; 5 x 4 meters and even 2 x 1.4 meters, or are thinned out on a tall trunk at 10 x 10 meters. The space between rows is used for vegetable crops, cotton, wheat. The soil in the orchards is carefully cultured, lots of organic fertilizer being applied.

Card 2/3

44918
S/788/62/000/008/001/003

26.2311

AUTHORS: Vasil'yev, K.V., Candidate of Technical Sciences; Isachenko, A.A., Engineer.

TITLE: On the employment of plasma heating in welding processes.

SOURCE: Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut avtogennoy obrabotki metallov. Trudy. no.8. 1962. Gazoflyusovaya naplavka i svarka, kislorodnaya rezka, metallizatsiya. pp. 55-71.

TEXT: A plasma is defined as highly ionized matter (10^9-10^{10} charged particles per cm^3), a mixture of normal molecules, atoms, + (at times also -) ions, electrons, and photons. High temperature (HT) or electron impact (EI) in a gaseous discharge may be the source of ionization.. In the HT case the plasma is isothermal and self-perpetuating. In the EI case the plasma is not in isothermal (hence, not in thermal) equilibrium and requires a continuous perturbation source. In either plasma the mean + and - space charge at each point of space is fully compensated by electrostatic interaction. In nonisothermal plasma, the temperature (T) relationships are $T_{electron\ gas} > T_{ion\ gas} > T_{neutral\ molecules}$. The electrons and ions have a Maxwellian velocity distribution according to their T. The plasma is electrically conductive and magnetically active. The internal plasma magnetic field has a destabilizing effect; external fields compress and stabilize the plasma. The internal energy of the plasma particles is released in the form of thermal and photon fluxes

Card 1/5

On the employment of plasma heating in welding processes. S/788/62/000/008/001/003

upon the recombination of the charged particles into atoms, and also as an effect of bremsstrahlung. 16 to 20,000°K can be achieved with comparatively simple means. Whereas an interelectrode discharge in a quiescent gas contains primarily electrode-material vapors, a gas may be blown through the arc, whereupon a plasma consisting of the ionized gas is formed. Ar, He, and N plasma jets were experimentally achieved. Pure H plasma jets could not be formed because of combustive flame formation; H plasma jets with some Ar content could be formed. Great difficulties were encountered in attempts to obtain plasmas of active gases, such as air, O, and H-O mixtures (water vapor), because the W, graphite, and other electrode materials are too readily oxidizable. Short-term formation of "water plasma" was achieved by means similar to the Gerdien burner (Usp. fiz. n., v. 55, no. 4, 1955, 595). An electrode-feed system, designed to overcome the oxidization problem, resulted in an overly complex and cumbersome mechanism. Not even a short-term plasma formation could be obtained with O plasma because of electrode combustion. Carborundum electrodes, such as are used in underwater O-arc cutting, were most effective. Arc starting was facilitated by steel surfacing (0.15-0.20 mm thick) of the carborundum electrodes. The arc lasted for minutes at a time, but its shape was far from cylindrical. Nevertheless, an O-plasma jet employed to cut a low-C steel plate, 200x40x10 mm, placed on edge lengthwise, created a blind wedge-shaped cutting gap 28-30 mm deep. O-Ar-mixture plasma jets were also obtained. Increase in gas-flow rate improves the arc plasma and the service life of the gas nozzle. The

Card 2/5

On the employment of plasma heating in welding processes. S/788/62/000/008/001/003

arc voltage is increased thereby; it rises more sharply in diatomic gases, also more greatly in a H-Ar mixture than in an Ar-N mixture. A neutral Ar plasma, generated by a d.c. arc, was tested in butt-welding of 1.5 and 3 mm thick 1X18H9T (1Kh18N9T) stainless-steel plate. The motion of the burner was strictly longitudinal. Welding-rod welding in this fashion was found impracticable because of inadequate heating of the metal to which the welding-rod droplets should, but did not, adhere. On the one hand lateral oscillation was introduced, whereas, on the other hand, welding was done without additional welding material. In the latter instance, metallographic examination and X-ray transillumination revealed a weld with normal dendritic structure and only a narrow temperature-affected zone with enlarged austenitic grains. Welding rate: 3.1 m/min for the 1.5-mm sheet; 2.6 m/min for the 3-mm sheet . Laboratory tests were also made with fine-particle deposition of W and Al oxide on a 1Kh18N9T plate 10 mm thick by feeding the Al-oxide powder into the plasma-forming gas jet. The difficulties of that method must be weighed against the promise afforded by A.N. Shashkovich's method, wherein a hard-alloy paste (using an organic-glue or waterglass binder) is painted onto the metal surface and is then melted and welded on by means of a plasma jet. An assessment of the energy balance of plasma-welding equipment is attempted with full recognition of the difficulty created by the practically unknown temperature of the plasma. Theoretical calculations and supporting experimental

Card 3/5

findings afford the following conclusions: 1. Ordinary penetrating arcs formed in externally water-cooled tips are energywise substantially preferable over plasma jets of equal energy input. 2. The current in a penetrating arc must be consistent with the diameter of the exit channel of the tip that forms it. Beyond a certain limit, an increase in arc current worsens the heat propagation in a penetrating arc; in a plasma-forming arc the energy balance is not altered thereby. 3. An increase in gas-flow rate improves the energy utilization in the arc which, at small gas-flow rates, deteriorates sharply in plasma-generating arcs. Fairly simple means can be developed to utilize the heat emitted in the arc plasma in welding. It is possible to intensify the heat rejection of the arc discharge so as to increase the heat content of the arc plasma. Two extreme variants, in which maximum energy localization is either directed upon the active spot on the welding object or contained within the free plasma jet, are covered by a feeding system (circuitry shown), which permits coverage of a large number of intermediate schemes. The seven basic welding operations are examined and tabulated with reference to (1) the object of the desired heat delivery, (2) the character of the heat delivery, (3) the character of the gas flow, and (4) the requirements relative to shielding of the welded object. All of these findings apply equally to the welding of nonmetallic materials, with the proviso that electrically nonconductive materials can be heated only by the free plasma jet. In metals welding the heat

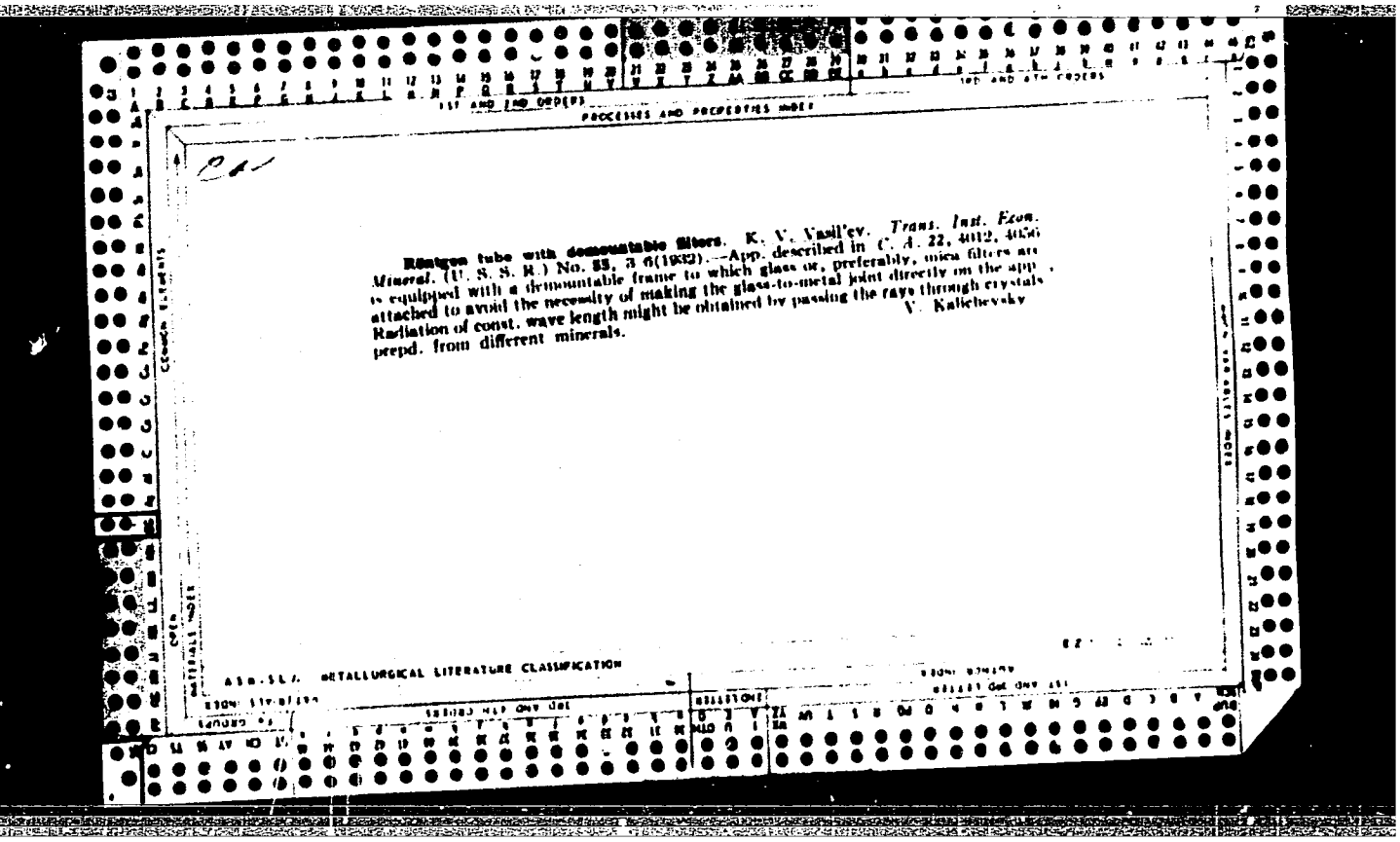
may go either (a) into the welding object, or (b) into the welding-rod material, or (c) into both. In case (a) an arc, stabilized by the flow of its own plasma, appears preferable, except for pressure-welding (without added material) and cutting of thin sheet metal, in which the heat rejection of the directly penetrating arc may be excessively intense. (b) is best served by a free plasma jet, (c) by a carefully regulated intermediate arrangement. Fine-particle metallization is best served by a long-arc free plasma jet in which the ejected pulverized material has a long path length in which it can be heated to a suitable temperature. A summary table reviews these reasonings. There are 9 figures, 6 tables, and 21 references (11 Russian-language Soviet, 9 English-language, 1 German).

ASSOCIATION: None given.

SPEKTOR, O.Sh.; VASIL'YEV, K.V., kand.tekhn. nauk, retsenzent; RAGAZINA, M.F., inzh., red.; UVAROVA, A.F., tekhn. red.; MAKAROVA, L.A., tekhn. red.

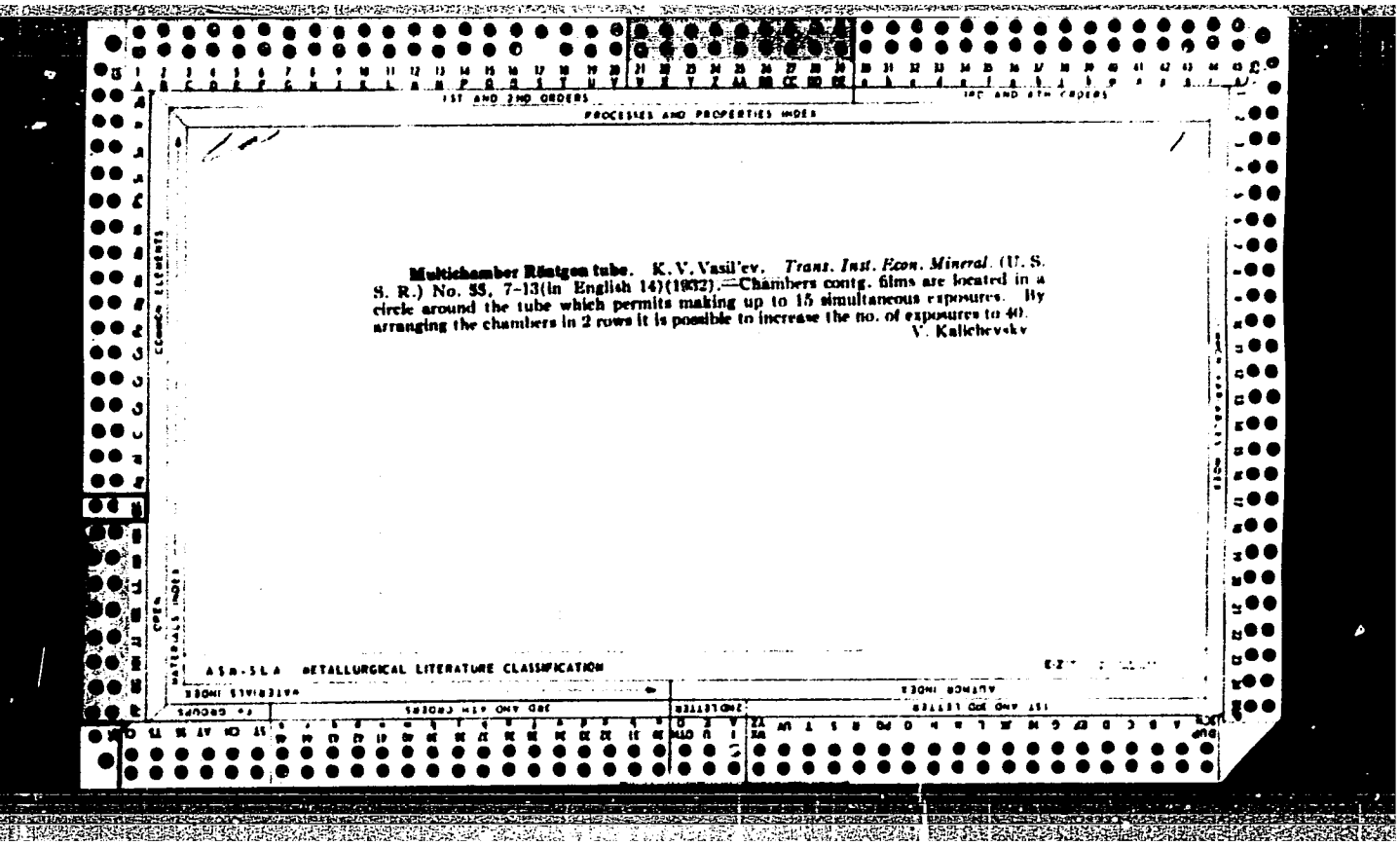
[Oxygen-flux cutting of stainless steel]Kislorodno-fliusovaia rezka nerzhaveiushchikh stalei. Moskva, Mashgiz, 1962. 159 p. (MIRA 16:2)

(Gas welding and cutting)

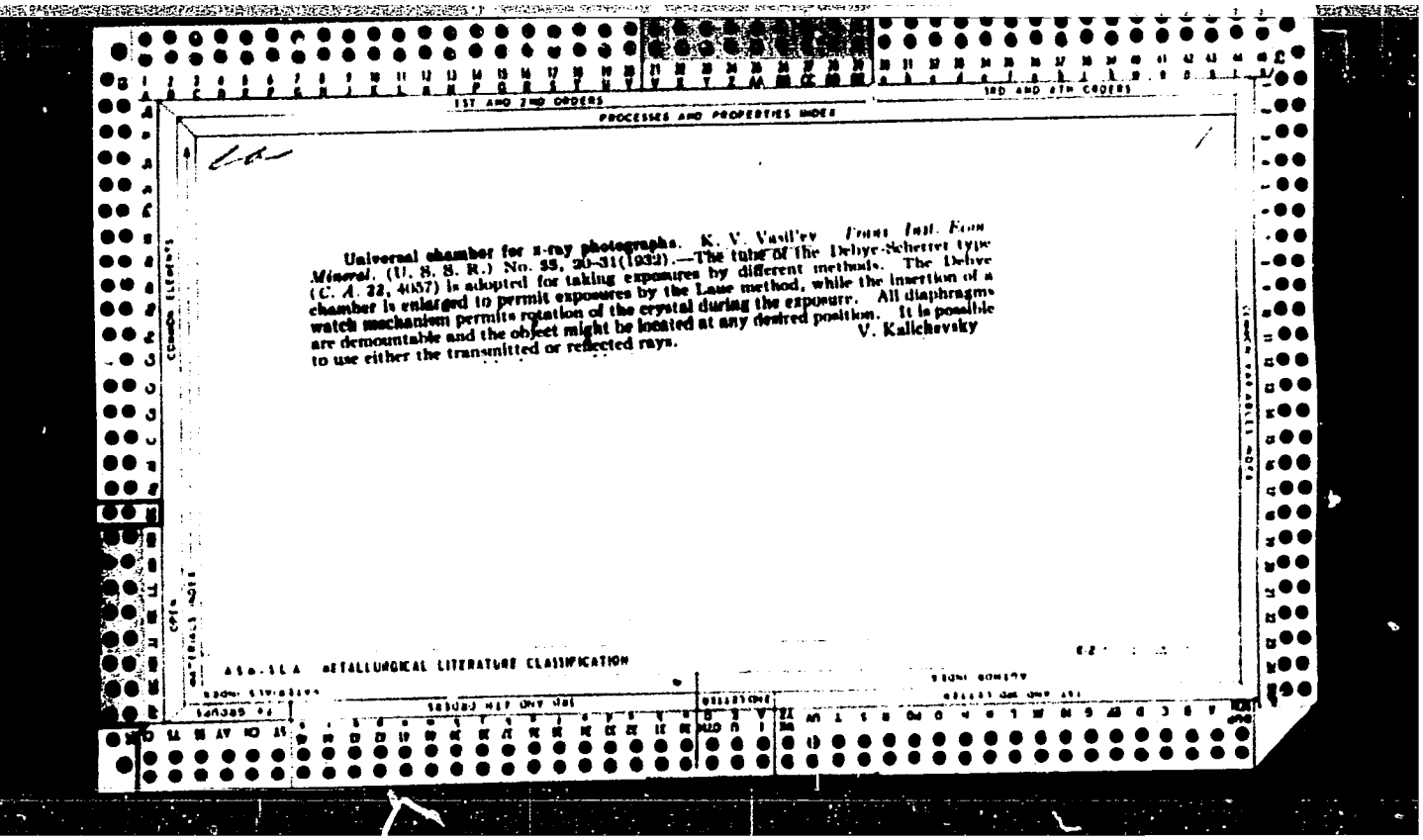


Röntgen tube with demountable filters. K. V. Vasil'ev. *Trans. Inst. Econ. Mineral.* (U. S. S. R.) No. 33, 3-6(1932).—App. described in *C. A.* 22, 4012, 4050 is equipped with a demountable frame to which glass or, preferably, mica filters are attached to avoid the necessity of making the glass-to-metal joint directly on the app. Radiation of const. wave length might be obtained by passing the rays through crystals prepd. from different minerals.

V. Kalichevsky



Multichamber Röntgen tube. K. V. Vasil'ev. *Trans. Inst. Econ. Mineral.* (U. S. S. R.) No. 55, 7–13(in English 14)(1932).—Chambers contg. films are located in a circle around the tube which permits making up to 15 simultaneous exposures. By arranging the chambers in 2 rows it is possible to increase the no. of exposures to 40.
V. Kalichevsky



PROCESSES AND PROPERTIES INDEX

Universal chamber for x-ray photographs. K. V. Vasil'ev *Trans. Inst. Econ. Mineral.* (U. S. S. R.) No. 35, 20-31(1932).—The tube of the Debye-Scherrer type (*C. A.* 22, 4057) is adopted for taking exposures by different methods. The Debye chamber is enlarged to permit exposures by the Laue method, while the insertion of a watch mechanism permits rotation of the crystal during the exposure. All diaphragms are demountable and the object might be located at any desired position. It is possible to use either the transmitted or reflected rays.
V. Kalichevsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

VASIL'EV, Kirill Vladimirovich.

Recent developments in mine lighting technique--- Moskva, [illegible], [illegible].
90 p. (Il-3[illegible]2)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001858910001-8"

VASIL'YEV, K.V.; FAYBISOVICH, I.L., redaktor; NADEINSKAYA, A.A., tekhnicheskiy redaktor.

[Lighting in mines; from lecture series "New developments in mining engineering."] Rudnichnoe osveshchenie; iz tsikla lektsii "Novosti gornoi tekhniki." Moskva, Ugletekhizdat, 1954. 35 p.
(Mine lighting)

VASIL'YEV, K.V., inzhener

Mine lighting from mains with explosion proof SVPI type lamps. Nauch. rab. VUGI no.11:153-163 '54. (MLRA 8:11)
(Mine lighting) (Coal mines and mining--Safety measures)

VASIL'YEV, Kirill Vladimirovich,; LYUBIMOV, M.G., otv. red.; KOTEL'NIKOVA, G.A., red. izd-va,; BERESLAVSKAYA, L.Sh., tekhn red.; SHKLYAR, S.Ya., tekhn. red.

[Battery-powered lighting equipment for mines and means of improving it] Shakhtnoe akkumuliatornoe osveshchenie i puti ego usovershenstvovaniia. Moskva, Ugletekhizdat, 1958. 51 p. (MIRA 11:12)

(Mine lighting)

VASIL'YEV, K.V.

Improving storage-battery cap lamps. Ugol' 34 no.9:11-14 S. '59.
(MIRA 12:12)

(Electric lamps, Portable)

VASIL'YEV, K.V., inzh.

Selection of the basic parameters for battery mine lamps using incandescent bulbs. Nauch. soob. IGD 11:166-173 '61.
(MIRA 16:4)

(Mine lighting)

VASIL'YEV, K.V., starshiy prepodavatel'

[Electrical measurement of mechanical quantities using pulse techniques; a textbook] Elektricheskie izmereniia mekhanicheskikh velichin impul'snym metodom; uchebnoe posobie. Leningrad, Leningr. lesotekhn. akad. im. S.M.Kirova, 1962. 72 p. (MIRA 15:7)

1. Kafedra mashin Leningradskoy lesotekhnicheskoy akademii im. S.M.Kirova (for Vasil'yev).

(Transducers) (Electric measurements)

VASIL'YEV, K.V., kand. tekhn. nauk

All-Union seminar on the use of a confined arc for welding and cutting. Svar. proizv. no.3:44-45 Mr '65. (MIRA 18:5)

VASIL'YEV, K. V.; ISACHENKO, A. A.; SEGALOVA, O. I. engineer

"Study of the Plasma Arc Cut"

Paper presented at 18th Annual Assembly, Intl Inst of Welding, Paris, 5-10 Jul 1965.

Z/046/62/000/001/002/007
D007/D102

1,1110

AUTHOR: Vasil'yev, Kirill, V., Candidate of Sciences

TITLE: On the energy distribution in plasma cutting of metals

PERIODICAL: Zváračský sborník, no. 1, 1962, 24-30

TEXT: The energy distribution in the arc plasma was experimentally studied at the VNIIAvtogen research institute by determining the quantity of heat absorbed by an externally cooled nozzle. The determination was made by measuring the enthalpy of the nozzle-cooling water which was tapped off into a calorimeter bucket. It was found that a 10-mm long, 3-mm diameter nozzle absorbed about 35% of the total discharge energy at a total argon flow of 160 liters/min, and that this rate increased to 60% when only 60 liters/min of argon were used. An experimental oscillographic study of the cutting part of the plasma arc, made on a set of insulated plates individually connected to oscillographs, showed that the heat transfer from the plasma arc to the work metal can be divided into three zones: In the zone nearest to the nozzle, metal is melted mainly by the arc column; in

Card 1/2

the middle zone by the active spot of the arc; and in the lower zone by the plasma stream. In addition to the inert-gas plasma-arc cutting, good prospects are also seen for the oxygen-plasma arc-cutting method combining the heating effects of the arc with the effects of energy released by the ensuing chemical reaction. Although many technological difficulties will have to be overcome, this method deserves further study because of its inherent advantages, especially its economy and adaptability to automation. There are 6 figures. (Translator: Engineer J. Vrbenský, VÚZ Bratislava)

ASSOCIATION: VNIIAvtogen, Moscow

ACCESSION NR: AT4042512

AUTHOR: Vasil'yev, K. V. (Candidate of technical sciences); Isachenko, A. A. (Engineer)

TITLE: The geometry of the plasma-arc cut

SOURCE: Vsesoyuznyy nauchno-issledovatel'skiy institut avtogennoy obrabotki metallov

[illegible] gas and electric cutting, spraying, [illegible]

TOPIC TAGS: metal cutting, plasma torch, metal cut edge, metal cut width, metalcut formula, cutting automation

ABSTRACT: Additional refinement of the technology of plasma arc cutting requires information on the accuracy obtainable under conditions of a maximally automated process. The formulas expressing the relationship between amount of cut-off metal per unit of time, the parameters of the cutting process and the conditions of interaction of the [illegible] the processed object are presented and discussed. The formulas were developed from earlier ones established for rotating objects. Form and width of a plasma-arc cut were [illegible]

Card 1/2

on the form and width of the cut. Cutting was found to go through 3 stages which influence

An optimum was found at 500-520 amps. Raising the jet above the metal will also lead to cut widening, particularly at its upper part. Optimal results were obtained, e.g., for a 380-400 amp. current, a gas consumptic of 39-41 liters/min (35% hydrogen in the mixture), a cutting rate of 0.51-0.55 m/min and a height of 0.5-1.0 mm of the jet above the metal. Orig. art. has: 6 formulas, 3 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, IE

NO REF SOV: 002 OTHER: 000

Card 2/2

S/135/62/000/012/009/015
A006/A101

AUTHORS: Vasil'yev, K. V., Candidate of Technical Sciences, Maslova, Ye. P., Engineer, Moiseyev, I. A., Candidate of Technical Sciences, Sinyavskiy, V. S., Engineer

TITLE: Gas-electric cutting of alloy AMr6 (AMg6)

PERIODICAL: Svarochnoye proizvodstvo, no. 12, 1962, 23 - 25

TEXT: To develop gas-electric cutting techniques for alloy AMg6, TsNII MPS together with VNIIAVTOGEN carried out an experimental investigation to determine optimum cutting conditions, and the fatigue limit and corrosion resistance of the alloy after cutting. AMg6 sheets, 4, 8 and 12 mm thick were cut on a KDP -1-57 (KDR-1-57) machine designed by VNIIAVTOGEN. It was found that the quality of the cut depended upon the hydrogen content in the argon-hydrogen mixture; best results were obtained at 40 to 51% hydrogen in the mixture. Moreover the quality is predetermined by the accordance of the cutting speed and the operational current strength. The cutting speed and gas consumption depend upon the thickness of the metal. At a lower speed the surface of the cut is flashed, and a burr is formed on the lower edge. The edges can be vertical and inclined and show

S/135/62/000/012/009/015
A006/A101

Gas-electric cutting of alloy 6 (AMg6)

satisfactory quality under optimum conditions. The fatigue limit was tested on specimens cut by mechanical means and by the gas-electric method. The results were only slightly different (8.9 against 7.7 kg/mm^2). The corrosion resistance for both types of specimen is similar. Overheating during cutting does not cause proneness to stress corrosion of the alloy. There are 7 figures and 1 table.

ASSOCIATION: VNIIAVTOGEN (Vasil'yev and Maslova); TsNII MPS (Moiseyev and Sinyavskiy)

Card 2/2

VASIL'YEV, K.V.

Terminology used in the gas-arc cutting process. Avtom.svar. 14 no.9:47-50 S '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut avtogennoy obrabotki metallov.
(Electric metal cutting) (Protective atmospheres)

VASIL'YEV, K. V.

14T6

USSR/Welding, Arc Jul 1947
Welding - Methods

"Underwater Welding With Shielded Electric Arc," K.V. Vasil'yev, M.S. Kaufman, 3 pp

"Avtogennoye Delo" No 7

Describes difficulties met in underwater welding and methods for overcoming several of these, such as heat distortion, by means of using a shielded electric arc. Diagrams and tables of experimental results included.

14T6

VASIL'YEV, K.V.; GOLUBEV, K.N., otvetstvennyy redaktor; NELIDOVA, E.S., redaktor; VOLKOVA, Ye., tekhnicheskiy redaktor

[Underwater cutting and welding of metal] Podvodnaia rezka i svarka metalla. Moskva, Izd-vo "Morskoi transport," 1955. 111 p. (MLRA 9:6)
(Underwater welding and cutting)

VASIL'YEV, K.V., kandidat tekhnicheskikh nauk

Journal entitled "Welding technology", published in the German Democratic Republic. Svar. proizv. no.2:31-32 F '55. (MLRA 8:9)
(Germany, Eastern--Welding)

VASIL'YEV, K.V.

Oxygen drive for gas cutting machines. Trudy VNIIAvtogen no.3:160-179 '55. (MIRA 11:12)
(Gas welding and cutting--Equipment and supplies)
(Gas turbines)

BRODOVICH, N.V., kandidat tekhnicheskikh nauk; VASIL'YEV, K.V., kandidat tekhnicheskikh nauk

Preparation of cracks for welding with the aid of an electric arc. (MLRA 8:9)
Svar. proizv. no.6:27-29 Je '55.
(Electric welding)

Vasil'yev, K. V.

AID P - 5596

Subject : USSR/Engineering

Card 1/1 Pub. 107-a - 8/12

Author : Vasil'yev, K. V., Kand. of Tech. Sci., and Yu. V. Kurlovich, Eng.

Title : Copying from drawing with MDM-2 gas cutting machine

Periodical : Svar. proizv., 11, 28-30, N 1956

Abstract : The operation and details of construction of the MDM-2 oxyacetelyne gas-cutting machine, developed by the All-Union Scientific Research Institute of the Autogenous Treatment of Metals (VNIIAvtogen), is described. This automatic unit can cut from drawing or templet, and is claimed to be more advanced than existing machines of this type. Four photos.

Institution : As above

Submitted : No date

VASIL'YEV, K.V.

ANTONOV, I.A., kand.tekhn.nauk; ANTOSHIN, Ye.V., inzh.; ASINOVSKAYA, G.A., inzh.; VASIL'YEV, K.V., kand.tekhn.nauk; GUZOV, S.G., inzh.; DEYKUN, V.K., inzh.; ZAYTSEVA, V.P., inzh.; KAZBEKOV, P.P., inzh.; KARAN, Yu.B., inzh.; KOLTUNOV, P.S., kand.tekhn.nauk; KOROVIN, A.I., inzh.; KRZHECHKOVSKIY, A.K., inzh.; KUZNETSOVA, Ye.I., inzh.; MATVEYEV, N.N., tekhnik; MOROZOV, M.Ye., inzh.; NEKRASOV, Yu.I., inzh.; NECHAYEV, V.D., kand.tekhn.nauk; NINBURG, A.K., kand.tekhn.nauk; SPEKTOR, O.Sh., inzh.; STRIZHEVSKIY, I.I., kand.khim.nauk; TESMENITSKIY, D.I., inzh.; KHROMOVA, TS.S., inzh.; TSEUNEL', A.K., Inzh.; SHASHKOV, A.N., kand. tekhn.nauk, dots.; SHEINCHNIK, M.M., inzh.; SHUKHMAN, D.Ya., inzh.; EDEL'SON, A.M., inzh.; VOLODIN, V.A., red.; UVAROVA, A.F., tekhn.red.

[Machines and apparatuses designed by the All-Union Institute of Autogenous Working of Metals] Mashiny i apparty konstruktsii VNIIAvtogen. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1957. 173 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut avtogennoi obrabotki metallov, no.9)

(Gas welding and cutting--Equipment and supplies)

Vasil'yev, K.V.

SUBJECT: East Germany/Welding 135-1-13/14

AUTHOR: Vasil'yev, K.V., Candidate of Technical Sciences.

TITLE: The periodical "Svarochnaya Tekhnika" (DDR) in 1956. (Zhurnal "Svarochnaya Tekhnika" (ГДР) in 1956).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 1, pp 30-31 (USSR).

ABSTRACT: The article deals with the contents of "Svarochnaya Tekhnika" in East Germany in the year 1956. The editorial in No 5 of that periodical discusses the 232 million Deutsche Mark economy to be achieved through the automation of welding during the five-year-plan 1956-60, and the necessity to produce in this period 3,000 semi-automatic welding machines, 70,000 tons welding rods, and 77,000 tons fluxes.

The article enumerates the contribution to the periodical by the East-German authors (also Czechoslovak and Polish); mentions W. Anders and Dr. Gil'de (probably Hilde), the leading technicians of the ЦИС (Central Welding Institute), the visiting of the Soviet Union by a delegation of German specialists in 1955. A report by the ЦИС head, Doctor Gil'de (probably Hilde) in No 2 of the periodical analyses East German welding

Card 1/2

TITLE: The periodical "Svarochnaya Tekhnika" (DDR) in 1956. (Zhurnal "Svarochnaya Tekhnika" (ЦИС) in 1956). 135-1-13/14

techniques and deals with the ЦИС activity; refers to the distribution of allotments in 1955 amounting to 48% for research work, 29 % for technology, 17 % for instruction; states that the volume of research work in 1955 constituted 268% in comparison with 1952 and the serious difficulties encountered in introducing into practice the institute's measures, which require much time and effort.

INSTITUTION: Not stated

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 2/2

VASIL'YEV, K.V.

137-58-1-1009

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 142 (USSR)

AUTHOR: Vasil'yev, K. V.

TITLE: Duplex Cutting of Flanges (Dvukhkonturnaya rezka flantsev)

PERIODICAL: Tr. Vses. n. - i. in-ta avtogen. obrabotki metallov, 1957. Nr 4, pp 52-68

ABSTRACT: It is stated that oxygen cutting may be employed in the manufacture of flanges (F). A procedure for shape cutting is examined, a table of recommended cutting schedules is presented, and a nomogram for the determination of the possibility of 2-cutter F cutting is offered. A head for mechanized cutting of F with external diameters of 110-800 mm and internal diameters of 5-640 mm from 5-100 mm-thick sheet steel is described. The designs of support fixtures for mounting the head are examined.

A. Ts.

1. Flanges--Oxygen cutting

Card 1/1

VASIL'YEV, K.V.

AUTHORS: Vasil'yev, K.V. and Vilkov, F.P. 68-12-12/25

TITLE: Some Changes in the Construction of the Coke Quenching Car (Konstruktivnye izmeneniya koksotushil'nogo vagona)

PERIODICAL: Koks i Khimiya, 1957, No.12, pp. 31 - 32 (USSR).

ABSTRACT: Some changes made in the coke quenching car are described and illustrated (2 figures). Main points: introduction of roller bearings, lights in the driver's cabin indicating closing and opening of the discharge doors and double bottom. The latter forms a container for coke fines which are pneumatically discharged in the quenching tower by the driver. There are 2 figures.

ASSOCIATION: Kuznetsk Metallurgical Combine (Kuznetskiy metallurgicheskiy kombinat)

AVAILABLE: Library of Congress

Card 1/1

Vasil'yev, K. V.

135-12-11/17

AUTHOR: Vasil'yev, K.V., Candidate of Technical Sciences, and Shapiro, I.S., Engineer

TITLE: Oxygen-arc Cutting with the Use of Steel Bar Electrodes (Kislorodno-dugovaya rezka s ispol'zovaniyem stal'nykh sterzhnevykh elektrodov)

PERIODICAL: Svarochnoye Proizvodstvo, 1957, # 12, p 33-36 (USSR)

ABSTRACT: A new method and a device for manual cutting structural steel are described, which were investigated and devised by the authors at VNIIAvtogen in 1956. The oxygen-arc cutter "РГД-1-56" (Figure 4) is designed as a fixture attachable to any conventional electrode holder and requires nothing but the conventional steel electrode bars and welding equipment in addition to an oxygen container with hose. The entire device is diagrammed in Figure 5. Cutting operation parameters and electrode coating are recommended. The method eliminates the drawbacks of the known methods of manual cutting construction steel (Ref. 1 through 7 and work of K.P. Voshchanov and Ya.D. Rinskiy of the Moscow Welding Technicum in 1938). Calculation shows that mechanized oxygen-arc cutting would cost about half as much as

Card 1/2

machine oxy-acetylene cutting (Table 2). The cutting speed is about the same as by oxy-acetylene method. The resulting cut is clean (Figure 7). The authors say that further technological and design improvements are the task of the technicians. Technician L.A. Puchkov participated in investigation work in 1956 at the Department of Gas-Electrical Processes of VNIIAvtogen. Engineers A.N. Kazanskiy and A.S. Shesterikov designed the cutter.

There are 4 photographs, 3 diagrams, 4 tables and 7 references, 3 of which are Russian, 1 English and 3 German.

ASSOCIATION: VNIIAvtogen

AVAILABLE: Library of Congress

Card 2/2

VASIL'YEV, Kirill Vasil'yevich, kand. tekhn. nauk; SHAPIRO, Il'ya Samuilovich, inzh.; NEKRASOV, Yuriy Ivanovich; RAGAZINA, M.F., inzh., ved. red.; SHTERLING, S.Z., dots., red.; SOROKINA, T.M., tekhn. red.

[Oxygen-arc cutting of metals. Backfire localizing device for gas and petroleum cutting torches] Elektrokislorodnaia rezka metallov. Lokalizator obratnykh udarov v benzo-i kerosinorezakh. [By] IU.I.Nekrasov. Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958. 12 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema 12. No.M-58-102/8) (MIRA 16:2)

(Gas welding and cutting)

VASIL'YEV, Kirill Vasil'yevich; SHAPIRO, Il'ya Samuilovich; SHTEYNTSAYG, Kalman Khaymovich; RAGAZINA, M.F., inzh., red. red.; SOROKINA, T.M., tekhn. red.

[Air-arc cutting of metals. P.A.Vachkov's method for the gas planing of steel]Vozdushno-dugovaia rezka metallov. Gazovaia strozhka stali po metodu P.A.Vachkova. Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958. 13 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyy opyt. Tema 12. No.M-58-70/7) (MIRA 16:3)
(Electric metal cutting) (Gas welding and cutting)

25(1) PHASE I BOOK EXPLOITATION SOV/2914

Vasil'yev, Kirill Vasil'yevich, and Il'ya Samoylovich Shapiro

Dugovaya elektricheskaya rezka metallov (Electric-arc Cutting of Metals) Moscow, Trudrezervizdat, 1958. 66 p. (Series: Novaya tekhnika i peredovyye metody truda) 10,000 copies printed.

Scientific Ed.: V.S. Chernyak; Ed.: L.P. Sitnikov; Tech. Ed.: Yu. N. Gorokhov.

PURPOSE: This booklet is intended for teachers and foremen of labor-reserve schools. It may also be useful for technical personnel and skilled workers in industry and construction.

COVERAGE: This booklet contains information on arc cutting of metals and the equipment used. Four methods of cutting metal are described: electric-arc, arc-air blast, shielded-arc, and oxygen-arc. No personalities are mentioned. There are no references.

Card 1/3

SOV/2914

Electric-arc Cutting of Metals

TABLE OF CONTENTS:

Card 2/3

AVAILABLE: Library of Congress (TK4660.5.V3)

GO/gmp
1-18-60

Card 3/3

SOV-135-58-2-6/18

AUTHORS: Vasil'yev, K.V., Candidate of Technical Sciences, and Shapiro, I.S., Engineer

TITLE: Air-Arc Cutting of Metals (Vozdushno-dugovaya rezka metallov)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 2, pp 22 - 25 (USSR)

ABSTRACT: The article contains general information on the air-arc cutting method as well as technological recommendations. Information includes detailed description and operation proceedures for the "RVD-1-57" cutting torch, designed by VNIIAvtogen; the new torch design ensures stable cutting process without breakdowns and simplifies adjustment of the electrode work length. There are 5 graphs, 2 tables, 3 photos, 1 diagram and 5 references, 3 of which are Soviet, 1 English and 1 French.

ASSOCIATION: VNIIAVTogen

Card 1/1 1. Cutting torches--Design

SOV/137-59-3-5876

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 133 (USSR)

AUTHORS: Vasil'yev, K. V., Shapiro, I. S.

TITLE: A Mechanized Gas-arc Method of Cutting of Light Metals and Alloys (Mekhanizirovannaya gazodugovaya rezka legkikh metallov i splavov)

PERIODICAL: Opyt raboty prom. Sovnarkhoza (Sovnarkhoz Mosk. gor.-ekon. adm. r-na), 1958, Nr 2, pp 27-30

ABSTRACT: Technology and apparatus permitting mechanization of operations of gas-arc cutting of light metals and alloys were developed by the VNIIAvtogen: The procedure involves melting of the metal to a considerable depth with the aid of a concentrated arc discharge occurring between a tungsten electrode and the component being cut, followed by blowing out of the molten metal with a jet of gas ($Ar+H_2$) which does not react with either the electrode or the article. The stream of gas also protects the edges of the cut against oxidation and concentrates the arc discharge; at the same time the dissociation of the H_2 introduces an additional quantity of heat into the lower portion of the cut. Optimal results were obtained with a mixture consisting of 65% Ar and 35% H_2. The cutting arc is excited by an auxiliary arc produced with

Card 1/2

A Mechanized Gas-arc Method of Cutting of Light Metals and Alloys

the aid of a HF stabilized electric-arc generator. The speed of cutting of Al at a current of 400 a varies from 8 m/min, at a thickness of 6 mm, to 0.5 m/min, at a thickness of 30 mm; the consumption of gas varies from 25 to 34 liters/min; the surface of the cut is covered with notches, which are inclined at an angle of 24-30° with respect to a line perpendicular to the upper edge of the cut, and exhibits a finish comparable to that obtained by mechanical means. The cut on the upper side of a 12 mm thick Al plate is 5 mm wide; in the case of a 20 mm thick plate it is 8 mm wide; the width of the cut on the lower side is in both instances equal to the diameter of the outlet opening of the nozzle (3 and 4 mm). The KDR-1-57 type device for mechanized cutting of light metals is composed of a blowpipe mounted on an adjustable holder, a control panel, and an automatic regulation unit. The adjustable holder permits cutting at various angles up to 40°. A PS-500 welding generator converted to supply 100 volts under open-circuit conditions may be employed. The gas employed in cutting operations is stored in two cylinders from which it is supplied to the welding apparatus through two pressure regulator-metering units of the DZR-1-57 type.

V. S.

SOV-135-58-3-17/19

AUTHOR: Vasil'yev, K.V., Candidate of Technical Sciences

TITLE: "Schweisstechnik" Periodical (GDR) in 1957 (Zhurnal "Schweiss-technik" (GDR) v 1957 g.)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 3, pp 46-48 (USSR)

ABSTRACT: General information is presented on the content of the periodical mentioned in the heading.

1. Periodical--USSR

Card 1/1

Vasil'yev, K.V.

135-58-4-10/19

AUTHOR: Vasil'yev, K.V., Candidate of Technical Sciences

TITLE: Arc Cutting of Aluminum Alloys in a Jet of Argon-Hydrogen Mixture (Dugovaya rezka alyuminiyevykh splavov v struye argono-vodorodnoy smesi)

PERIODICAL: Svarochnoye Proizvodstvo, 1958, Nr 4, pp 32-34 (USSR)

ABSTRACT: A new method of cutting aluminum by gas-shielded electric arc with the use of tungsten electrodes has been developed at VNIIAvtogen. The method consists in fusing the metal by a powerful arc discharge artificially concentrated on a sharply confined surface area. Optimum operating conditions have been found in experimental investigations. The cutting method and the special machine designed at VNIIAvtogen are described in detail. The machine is shown in a photograph. The optimum design of the nozzle is illustrated. The method is also suitable for cutting magnesium, non-ferrous metals and stainless steel. The following personalities took part in the investigations: I.S. Shapiro, engineer; D.Ya. Shukhman, engineer; Ye.P. Maslova, engineer; L.M. Gurevich and N.M. Kapranov.

Card 1/2

135-58-4-10/19

Arc Cutting of Aluminum Alloys in a Jet of Argon-Hydrogen Mixture

There are 6 figures, 1 photograph and 1 table.

ASSOCIATION: VNIIAvtogen

AVAILABLE: Library of Congress

Card 2/2

VASIL'YEV K.V.
(card 2)

135-58-4-17/19

AUTHOR: Tyul'kov, M.D., Candidate of Technical Sciences

TITLE: All-Union Scientific-Technical Conference on Welding in Shielding Gases (Vsesoyuznoye nauchno-tekhnicheskoye soveshchaniye po svarke v atmosfere zashchitnykh gazov)

PERIODICAL: Svarochnoye Proizvodstvo, 1958, Nr 4, pp 46-47 (USSR)

ABSTRACT: An All-Union scientific-technical conference on problems of arc welding in shielding gas was organized at Leningrad in December 1957 by the NTO Mashprom and the Commission of Coordination of scientific research work in welding attached to the Institut metallurgii AN SSSR (Institute of Metallurgy of the AS USSR). There were 425 representatives of plants, scientific research institutes, Vuzes and other organizations and guests from People's Democracies present. The Conference was opened by Professor K.V. Lyubavskiy, Doctor of Technical Sciences, Head of the welding section of the Tsentral'noye pravleniye NTO Mashprom (NTO Mashprom Central Administration). The Conference heard the following reports: A.V. Petrov, Candidate of Technical Sciences, on work carried out by NIAT in shielding gas

Card 1/4

All-Union Scientific-Technical Conference on Welding in Shielding Gases

welding; N.M. Novozhilov, Candidate of Technical Sciences, on the influence of initial material composition on joints welded in carbon-dioxide; V.N. Suslov, Candidate of Technical Sciences on "Metallurgical Problems Relating to the Welding in Carbon-Dioxide of Heat-Resistant Perlite Steel"; I.D. Kulagin, Candidate of Technical Sciences, on Peculiarities of the Effect of a Direct Current Arc in Gases on Electrode Surfaces"; M.D. Tyul'kov, Candidate of Technical Sciences, on the welding of movable and immovable tube butt joints without supporting rings; K.V. Vasil'yev, Candidate of Technical Sciences, on works carried out at VNIIAvtogen in gas shielded welding and on new metal cutting methods; M.N. Vishnevskiy, Engineer, on the application of atomic-hydrogen welding in industry; S.A. Segal', engineer, on "Comparative Investigations of Heat-Resistant Alloy Joints (EI602, EI435, EI703) Carried out by Argon-Arc and Electric Arc Welding"; A.G. Mazel', Candidate of Technical Sciences, on the work carried out at VNIIStroyneft' in the investigation of mechanical properties of low-carbon steel joints in welding with fusing electrodes in carbon-dioxide

All-Union Scientific-Technical Conference on Welding in Shielding Gases

and methods of improvement; S.N. Valeyev, engineer, and A.V. Mordvintseva, Candidate of Technical Sciences, on the technology of welding steel alloys in gas shields; A.S. Fal'kevich, Candidate of Technical Sciences, on the carbon-dioxide welding of oil-gas pipes; I.I. Zaruba, Candidate of Technical Sciences on welding in gas shields carried out at the institut elektrosvarki imeni Ye.O. Patona AN USSR (Institute of Electrowelding imeni Ye.O. Paton, of the AS UkrSSR); O.V. Meshkova, engineer, I.P. Prosyankin, engineer, F.A. Chernakov and others on problems of argon-arc welding of light alloys; F.Ye. Tret'yakov, M.Kh. Shorshorov, Candidates of Technical Sciences, A.P. Goryatchev and D.A. Polyakov, Engineers, on welding of titanium; B.A. D'yachkov on power sources for welding with fusible and infusible electrodesdeveloped at VNIESO; S.M. Katler, Candidate of Technical Sciences on equipment for argon-arc welding with tungsten electrodes of aluminum alloys; A.S. Berman on new equipment for shielded gas welding; G.M. Kasprzhak, I.Ya. Rabinovich, Candidates of Technical Sciences, and Ye.I. Slepushkina, Engineer, on direct current power sources

Card 3/4

All-Union Scientific-Technical Conference on Welding in Shielding Gases

with universal characteristics for arc welding; V.A. Sinikov, Engineer, on "Equipment for Automatic Arc Welding with Carbon Electrodes in CO_2"; P.T. Dmitriyev, Engineer, on the automation of welding thin-walled, small-diameter, IKh18N9T-steel tubes under assembly conditions. Guests from Czechoslovakia, Poland and GDR delivered also reports. The Conference decided to request the USSR Gosplan to develop the production of welding equipment, accessory devices, and electrodes, to cut the costs of 99.95% pure argon, to take into consideration the need for semi-conductor material in equipment production and to increase the production of hose cables at the "Sevkabel'" Plant for semi-automatic welding in CO_2.

AVAILABLE: Library of Congress

Card 4/4

Vasil'yev K.V.

135-58-6-5/19

AUTHOR: Vasil'yev, K.V., Candidate of Technical Sciences

TITLE: Equipment for Gas-arc Cutting (Oborudovaniye dlya gazo-dugovoy rezki)

PERIODICAL: Svarochnoye Proizvodstvo, 1958, Nr 6, pp 12-13 (USSR)

ABSTRACT: General information is given on the essential features of the gas-arc cutting processes developed during 1956-1957 at VNIIAvtogen: the oxy-arc method for cutting low-carbon steel, air-arc cutting, and cutting light metals by concentrated arc in a stream of argon-hydrogen gas mixture. Several Soviet plants are mentioned which are using the gas-arc cutting method ("Kompressor", Kanonerskiy, ZIL, "Svet Shakhtera", and others). Characteristics of the Soviet equipment are briefly indicated. US and German gas-arc cutting equipment is mentioned. There are 3 Soviet references.

ASSOCIATION: VNIIAvtogen

AVAILABLE: Library of Congress

Card 1/1

S/137/60/000/01/03/009

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No 1, p 153, # 1024

AUTHOR: Vasil'yev, K.V.

TITLE: A New Method of Oxygen-Arc Cutting of Steel

PERIODICAL: Tr. Vses. n.-i. in-ta avtogen. obrabotki metallov, 1959, No 5, pp 245 - 248

TEXT: VNIIAvtogen investigated a method of O_2-arc cutting of steel by applying a direct arc with a consecutively arranged separate cutting-nozzle. The author established the optimum magnitude of shift of the O_2-jet with respect to the arc, ensuring high quality cuts. For manual O_2-arc cutting the РГД -1-56 (RGD-1-56) cutter with two-hand control of the process was designed and tested. Steel eletrodes with thin or thick coating and standard d.c. or a.c. welding equipment may be used for cutting. Efficiency, quality

Card 1/2

and economy of manual O_2-arc cutting may be compared to C_2H_2-O_2 cutting. The developed equipment may be most efficiently used in performing short cuts combined with electric arc welding in repair, assembly and recovery work.

I.Z.